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### INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7: C07K 5/00, A61K 38/00

A1

(11) International Publication Number:

WO 00/26233

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(43) International Publication Date:

11 May 2000 (11.05.00)

(21) International Application Number:

PCT/US99/25737

(22) International Filing Date:

1 November 1999 (01.11.99)

(30) Priority Data:

60/106,732

2 November 1998 (02.11.98) U

US

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(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

#### Published

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: SELECTIVE TOXICITY OF AMINO-TERMINAL MODIFIED RNASE A SUPERFAMILY POLYPEPTIDES

#### (57) Abstract

This invention provides RNase A superfamily polypeptides with modified amino terminal which can be used to selectively kill target Kaposi's sarcoma cells, neoplastic endothelial cells, and non-neoplastic endothelial cells. In certain embodiments of the invention, the amino terminal modification consists of an addition of 4 amino acid sequence consisting of the SLHV sequence at position -4 to -1 to the eosinophil derived neurotoxin protein. The amino terminal addition is capable of directing the claimed RNase A superfamily polypeptides to proliferating endothelial cells, such as Kaposi's sarcoma cells, and selectively killing these cells.

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International application No. PCT/US99/25737

| IPC(7) :C07K 5/00; A61K 38/00 US CL :514/12; 530/324 According to International Patent Classification (IPC) or to both nat   | tional classification and IPC  |                       |  |  |  |  |  |  |
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